2019

An Exploration into the Evolution of Tutoring, A Comprehensive Business Plan for Launching the Online Tutoring Company Shortwork LLC, and A Post-Operative Analysis of Shortwork's Business Model

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AN EXPLORATION INTO THE EVOLUTION OF TUTORING,

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AND

A POST-OPERATIVE ANALYSIS OF SHORTWORK'S BUSINESS MODEL

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A thesis submitted to the faculty of The University of Mississippi in partial fulfillment of the requirements of the Sally McDonnell Barksdale Honors College

University, Mississippi
May 2019

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ACKNOWLEDGEMENTS

I want to give equal credit for Shortwork to Sam Harres. You spent an entire semester in the trenches with me taking our idea from a conversation over lunch to a fully-fledged business. It took late nights and long hours to make it work, and it would not have been possible with you.

Thank you to Owens Alexander and the Center for Innovation and Entrepreneurship. Without your guidance, encouragement, and belief in me, neither Shortwork nor this thesis would have been possible.

Thank you to my readers, Dr. Bob Brown and Dr. Adam Smith, for your participation in the production of this thesis and your support during my time at this University.

Thank you to my family for supporting me throughout my education and inspiring the ideas behind this business. You all have given me more than I can ever repay.

ABSTRACT

This thesis consists of a review of the history of tutoring and homework up to the modern day; the original business plan used to launch Shortwork LLC, an online tutoring company, in the Spring of 2018; and a post-operative analysis of its business model and executive decision-making, as well as discussion about the future of education. The business plan includes a competitive analysis of the online tutoring market, an overview of Shortwork's management structure, an explanation of its product model and technology, and both the financial and strategic details of its Spring 2018 plans for 3-year growth. The concluding section of this thesis, written one year after founding, examines Shortwork's successes and failures, resulting in critiques to the original business strategy, as well as the role technology could continue to play in education.

Formal education, which developed in different cultures millennia ago, requires only two fundamental elements: an instructor and a student. As formal education has expanded, so too have the number of instructors and students, but not at the same rate. As student populations have outpaced instructor populations, the individuality of instruction has declined.

The tutoring industry exists today because students struggle outside of the classroom and not just inside it. For the most part, it has mimicked the classroom

experience; tutors meeting in person with students to teach a subject. One of the primary roles of tutors today is to assist with homework, the take-home portion of most students' education that evolved generations ago. The digital revolution, however, has allowed online learning to challenge the traditional mold of study aids such as tutors.

Shortwork was founded to provide students with an affordable, online solution to the all-too-common problem of needing homework help. The service was built around its founders' experience helping real high schoolers, and early versions of the service tested well with current students. Its early success carried promise, and the company attracted over $10,000 in competition prizes within only three months of establishment as an LLC.

Due to poor choice in target market and diverging entrepreneurial visions for the company, however, Shortwork failed to maintain its momentum over the summer after its founding. By the end of 2018, its founders had decided to suspend the service until further notice. This thesis examines why they came to that decision.

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PART I: THE EVOLUTION OF TUTORING

A. Introduction

The history of tutoring, typically defined as the process by which someone teaches someone else, usually on an individual-to-individual basis, traces its roots to the history of formal education ("Tutoring"). Formal education grew out of necessity as early as 3500 BCE, brought about by "the division of labor caused by the multiplication of the interests of mankind which made it impossible for the home to continue wholly to care for the training of its children" (Seeley, 19). "Educational history concluded long ago that the common school rose in spite of tutorial education," according to Dr. Edward Gordon in his 1988 Ph.D. dissertation on the history of tutoring, in which he concluded that tutoring became viewed as "the outmoded prerogative of a few affluent children" (Gordon, 1). The trend away from individual tutoring has continued in some fashion ever since the creation of classroom education, but never so radically has education been democratized as by the digital revolution, the effects of which are still being discovered.

B. The History of Personal Tutoring and Homework

The history of personal tutoring is complicated by the fact that the term's "meaning as an educational concept has shifted over time, country and culture" (Gordon,

2). One thing that stayed constant, however, was that "[tutors] identified themselves closely with their pupils" (6-7). Tutoring began with "the transmission of knowledge through oral tradition" millennia ago, and for generations they sufficed in educating the young (11). "In the early aristocratic days of Greece," the glorified height of tutoring, "technical and literacy instruction were combined and taught" (18).

With the advent of community schools closer to 200 BC, education began to change, but tutors persisted, especially for aristocrats (13). During the Middle Ages, when tutoring took on a predominantly religious focus, "private tutoring… as a home activity" declined before reviving much later (47). During the later Middle Ages, specifically the Tudor Dynasty in England (1485 AD–1603 AD), royal tutors frequently found themselves in positions of power (153).

During the 1800s, "Upper and middle class English families had ample opportunities to educate their children at home in both modern and classical subjects" (228). As a result, "private tutors enabled many children to receive a more scientific and modern education than offered at most public schools or the universities," forever tying private tutors to success thereafter (229). Furthermore, "because of the continued inadequacy of many schools even the lower middle class were using [tutors] by 1865" (309).

In the twentieth century, as American public schools improved, "[visiting] teachers had come into existence to supplement the work of the classroom teacher, especially in cases of retarded or failing pupils" (431). This is the beginning of the modern tutoring industry: "these teachers offered one-to-one instruction for remedial

education and special education" (432). The stigma around getting assistance outside of the classroom has persisted ever since.

Homework developed in parallel with the tutoring model and likely contributed to its rise. Early schooling theory revolved around repetition and discipline (Vatterott). Early schooling was verbal instead of written. Because students need varying amounts of time to learn the same information, students would frequently have to practice their lessons verbally at home. As in-school work pivoted to written instruction, homework too became mostly written (Vatterott).

Homework has weathered volatile support (and lack thereof) in America. In the nineteenth century, it was popular. Early in the next century, progressives successfully fought to minimize homework in schools, even abolishing it in many school districts. The Space Race against Soviet Russia galvanized Americans to reconsider homework as both a vehicle for and test of intellectual prowess. The cultural pendulum swung back toward anti-homework sentiments during the Vietnam War-era countercultural movements.

By the 1980s, Americans had decided again that homework was "an effective learning strategy" (Vatterott), and the Department of Education began prioritizing higher standards in schools. The result became a "[focus] on strategies for getting children to complete homework" (Vatterott). The University of Michigan has since found that "homework for 6- to 8-year-olds had increased by more than 50 percent from 1981 to 1997" (Vatterott). As "homework increased, and parents began feeling overwhelmed… the mood [became] one of concern for overworked students and parents" (Vatterott).

Gordon closes his dissertation with the assertion that "… the challenge of better schooling requires a much broader study of tutorial philosophy and methods" (Gordon, 464). He argues, correctly, that "the tutor and teacher are not in competition with one another. Instead they seek an answer to the question of how a new alliance of 'tutoring' and 'teaching' will best serve society's learning requirements" (464).

One result of the increase in homework load and related parent stress has been an increase in private tutoring. Private tutoring allows for concerned or overworked parents to support their children's studies outside of the classroom and even at home. Paralleling the revival of homework in 1980 and 1990s, "the last 20 years are when [private tutoring] became a really widespread phenomenon," both in America and globally (Jon).

As a result of the digital revolution, the relationship between homework, tutoring, and teaching has been forced to change even since Gordon published his dissertation in 1988. Electronics, and their ever-increasing affordability, have changed the way people record and share information. Online classrooms and self-guided courses have allowed for more flexibility both in and out of school-based education ("The Technological Revolution in Education and What It Means for Your Career.").

Just as students no longer have to sit in classrooms to learn from in-person teachers, tutors no longer have to visit a student in person to assist them outside of class. While the various culturally-dependent definitions of "tutor" might have all shared a level of personal connection inherent to the person-to-person contact of traditional schooling methods, that element may soon be left behind as education turns to the internet for new ways to educate students. This has led entrepreneurs around the world to start companies

and industry giants to prioritize digital learning, together beginning to define the digital future for education (Kejriwal). Despite the rise of online educational services in the last decade, video-format online tutoring for homework remained unavailable to students. I identified the opportunity to address that open segment of the market, and in 2018 I launched my own startup to test the possibility that personalized video instruction over the internet could be the most promising direction for tutoring to develop.

PART II: SHORTWORK, LLC BUSINESS PLAN

A: Executive Summary

Our younger brothers, Jack and Charlie, get stuck on homework problems every once in a while, and they usually text us for help. Jack and Charlie feel like they only have two choices: give up on the problem and hope there's not one like it on the test, or pay $40 for an hour with a tutor just to cover a single homework problem. We believe there's a gap between those extremes, one that existing options aren't addressing very well. Ideally, students would have 24/7 access to customized homework help at the click of a button.

Shortwork is an online marketplace where customers can list homework questions and receive videos from college students explaining how to solve them. Customers are charged $3 per problem, $2 of which goes to the solver. Payment is securely handled through Stripe integration, and customers aren't charged until their problem is solved. The only personal information Shortwork collects are customers' first names and phone numbers. Customers upload a photo of their problem directly to Shortwork's website. Verified solvers then claim problems on a first-come, first-served basis from their curated feeds. Customers receive an automatic text message update when someone begins solving their problem, and they receive another text with the link to their lesson once their problem has been solved.

With its minimally viable product already producing valuable feedback, Shortwork is preparing to launch its "First Stage" of business to high school students across Mississippi, home to 38,000 high school students. Shortwork's pilot program has garnered more interest among honors students than non-honors students at Jackson Academy, so company leadership expect the earliest adopters to be among the upper 50% of high school students. To go beyond Mississippi, and access the 15+ million high school students in the United States, we hope to expand the service to include instant access to its library of prerecorded video solutions.

SnapAsk, our most similar competition, charges students over $500 for a year of access. On top of that, SnapAsk is only available in Southeast Asia and requires scanned submission of Photo ID and school enrollment documents. Chegg, our largest potential competitor in America, charges students $15 a month -- $180 a year -- for access to test banks and homework answers. They don't allow photo submissions or video lessons, and all users must create accounts. Furthermore, Chegg's answers often fail to include a sufficient explanation. Yup, another American competitor, does allow students to submit photos of their homework for custom responses. However, Yup's solvers are only able to offer help through a chat feature within the app. Yup does not allow video responses and is only available to students at participating schools districts.

Shortwork steps outside the traditional limits of online homework help. Students are offered a number of payment options, and are never required to purchase an expensive monthly plan. Our competitors also stop short of explaining their answers. Often times, as is the case with Chegg, answers are simply copied from the back of

textbooks. While this approach may help a student complete his/her homework assignment on time, it will not help that student complete similar problems on future assignments. Shortwork's video lessons—think of them as analog Khan Academy videos—are designed to teach. Shortwork solvers not only explain how they arrived at the answer, but they also explain the thought process behind their solution. By gradually building an indexed library of custom video solutions, Shortwork will offer students instant access to thousands of homework questions.

B: Market Analysis

1. **Problem Identification**

Jack and Charlie grew up in different states, in different schools, and with different academic strengths. One thing they have in common, though, is that they both get stuck on homework problems every once in a while, and they usually text us for help. They've typically already done 19 of 20 problems, but simply can't figure out the last one on the worksheet. Our brothers feel like they only have two choices: give up on the problem and hope there's not one like it on the test, or pay $40 for an hour with a tutor just to cover a single homework problem.

We believe there's a gap between those extremes, one that existing options aren't addressing very well. We interviewed over 30 high school students from three states, and they all wanted personalized lessons for hard homework questions, but they don't want to deal with the cost and commitment of a tutor.

There will always be students who need a tutor and students who just get it on their own. Ideally, though, the students in between should have 24/7 access to homework help at the click of a button.

2. Target Market

At this point, we have a functional, minimally viable product (MVP). We are just beginning to flesh it out via our first pilot program at Jackson Academy in Jackson, Mississippi. Based on their continuing input over the next few months, we hope to hone our design around their needs and wants. This will set us up to launch a "First Stage" of our business to high school students across Mississippi, which has 38,000 high school students. Our pilot program has garnered more interest among honors students than non-honors students at JA, so we expect our earliest adopters to be among the upper 50% of high school students. This first stage will involve a scaled-up and more feature- rich production version of our MVP built for higher throughput.

To go beyond Mississippi, and access the 15+ million high school students in the United States, includes expanding our service to allow users access to our library of video solutions. After collecting enough videos from the first product phase, we hope to open those videos up as a second stream of revenue with a lower barrier to entry and broader market appeal. If the service really did take off, there are over 2.4 billion students ages 5 to 18 worldwide, and the international education industry is currently valued at 350 billion dollars. There are certainly a significant number of those students struggling with homework around the clock.

C. Organization Structure

1. Management

We co-founded Shortwork in early 2018, midway through both of our junior years.

Sam Harres is an Accountancy major from Columbia, Illinois also studying Political Science. His experiences in law offices and accountancy classes have prepared him to intelligently and effectively manage the company's finances and business operations.

Will Tribble is a Mechanical Engineering major from Charlottesville, Virginia, though he grew up in Mississippi. His connections to Jackson, entrepreneurs throughout the country, and exposure to software development complement Shortwork's needs well. As technical lead thus far, Will has been responsible for the development of the service itself and its implementation at Jackson Academy. Will has also put us in touch with Oxbow Ventures and multiple options for outsourcing the development of our production app.

2. Ownership

Shortwork LLC is registered as a Limited Liability Company in the state of Mississippi. Both members of the LLC - Sam and Will - own a 50% stake in the company and are entitled to equal shares of any and all profit. At this time, no external investors are involved with Shortwork, but the team continues regular discussions with investors at Oxbow Ventures LLC in regards to a potential investment as the business continues to grow.

3. Advisement

Outside of the management team, Shortwork regularly calls on the aid and guidance of Alex Ray, founder of Zyn Careers and a member of Oxbow Ventures LLC. Alex has experience with technology startups and is currently responsible for new project identification at Oxbow Ventures. His strategic advice, specifically in the area of investment pitches, has proven invaluable as the company has grown. We also lean on help from faculty at the University of Virginia Darden School of Business and a professional software developer in New York City.

D. Shortwork's Solution

Shortwork's current phase has us offering an online marketplace where customers can list homework questions and receive videos from college students explaining how to solve them. Students don't even need to create an account. From start to finish, submitting a problem takes six clicks, an average of nine seconds. Customers are charged $3 per problem, $2 of which goes to the solver. Payment is securely handled through Stripe integration, and customers aren't charged until their problem is solved. The only personal information we collect are customers' first names and phone numbers.

Customers upload a photo of their problem directly to our site. Our verified solvers then claim problems on a first-come, first-served basis from their curated feeds — they only see problems they're qualified to answer. Customers receive an automatic text message update when someone begins solving their problem, and they receive another text with the link to their lesson once their problem has been solved.

E. Operations

1. Sales Plan

From start to finish, submitting a problem on Shortwork.co takes just six clicks and an average of nine seconds, highlighting our commitment to simplifying the purchase process. We envision Shortwork as a tool that students can call on, at the click of a button, to get rapid learning assistance.

Payment is collected via Stripe integration, and all personally identifying information is stored securely on Stripe's server. On-site, we collect only customers' first names and phone numbers. As we are dealing with the potentially vulnerable demographic of high school students, we felt it was incredibly important to place a wall between customers and solvers, to limit solvers' access to minors through our service. All solutions are verified by another solver in a double-blind process to ensure lessons are as accurate and useful as possible.

Students will be offered a variety of purchase options on the site. At its core, we envisioned Shortwork as a site where students could purchase individual lessons on a one-for-one basis. Thus, the option will always remains for students to pay a flat fee - currently $3.00 - to receive an custom video lesson in response to their homework question. Based on customer feedback, we will soon add a number of purchase plans to the site as well. Customers will have the ability to purchase six problems per month for $15.00. This model will save students three dollars on the month but also lower our overhead by requiring a stripe fee only once instead of six, individual times.

Additionally, we are working closely with school districts in Jackson and Oxford to get our service in the hands of as many students as possible. To make this happen, we are hoping to earn school-wide contracts - first at Jackson Academy, and later Oxford High School - to provide students with discounted, or free homework solutions subsidized by the school district.

If customers are unhappy with the video response they receive, or if they feel their answer was wrong, they automatically receive two free problems. We want our customers to feel confident in the service they are paying for, and customer service is a top concern. Unsatisfied customers are reached, via text, and asked to provide suggestions, comments, or criticisms that we can use to better serve customers in the future.

After honing this stage of the product in high schools around Mississippi, we see this product scaling to offer a searchable database of videos via subscription plans or pay-per-view. A video database will allow a much higher profit margin than the current product model, which would still exist for students with uncommon or bespoke problems, but we anticipate the masses of students using similar textbooks across the country appreciating instant access to instructional videos for the problems they have to work.

2. Technology

As a software as a service (SAAS) company, Shortwork employs a wide array of solutions to help efficiently serve its customers. We host our site, Shortwork.co, on Heroku's servers and run our databases on Heroku, as well. The site's domain extension is ".co" because a product photographer owns "shortwork.com" to advertise his services.

We still wanted a recognizable extension, however, and ".co" is a fairly common alternative to ".com" lately.

As a web-based payment solution, we are relying on Stripe integration to handle all payments from customers. The service stores all personally identifying information in its own, off-site, databases and ensures that Shortwork's customers' information is kept safely and securely. Additionally, the site is HTTPS secure, so all information is confidential over the internet. We utilize Amazon's S3 cloud storage database service to store customer submissions and solvers' lesson videos.

F. Go To Market Strategy

Shortwork's marketing plan to take our product from an MVP to a Phase 1 production app is split into three broad categories: solvers, students, and parents and third parties. This approach helps tailor our marketing strategy to each group's independent motivators.

We start with the solvers. Between the months of May and August, we hope to identify and implement brand ambassadors at five college campuses throughout the SEC. These ambassadors will take the lead on solver recruitment and retention at their own campus. Shortwork will provide them with promotional materials, giveaways, and branded merchandise to grow the solver base. We are also offering new solvers a chance to win a $100 Amazon gift card if they sign up and solve at least one problem before the end of April. Our holistic approach to new solver acquisition will involve not only the

opportunity to make up to $20.00 per hour from home solving high school-level homework, but also the ability to directly aid and teach the next generation of learners.

The next, and possibly most important, tip of the trifecta is students. Without students paying for lessons, the site fails. Thus, special care must be taken to ensure students are effectively targeted. To do so, Shortwork is offering every new customer two free lessons so that they can try the service before they buy. We are confident that once students try our service and reap the benefits, a large percentage will return as paying customers in the future. To find new students, we are leveraging a massive push on various social media platforms. We have hired a part-time social media administrator to coordinate our efforts. We want to create a clean, professional brand identity that customers trust. Our colors - blue and green - are familiar and our site and social media posts are kept as minimal as possible.

The third tip of our marketing approach is to parents and other academic stake-holders, including teachers and administrators, who have a vested interest in improving a student's grades. Parents may consider the direct financial benefits - lower insurance rates, greater financial aid offers, less student debt - that Shortwork's lessons can help deliver. Professional educators could leverage Shortwork to narrow the achievement gap for students that do not have access to the proper resources at home.

We want these groups on our side. For this reason, we aim to be as transparent as possible with parents and educators so that students feel proud of raising their test grades with our service. To start building this rapport, we are adding a "For Parents" section on our website that details the benefits Shortwork's lessons can confer. We also would like to

partner with local high schools to help connect as many students as possible, with the resources that are right for them. In practice, this would involve Shortwork signing a contract with school districts to provide their students with a set number of problems for a lump sum. We have begun a conversation with Jackson Academy about implementing this program, and hope to connect with Oxford High School in the coming weeks as well.

Moving forward after this model is proven and perfected, and enough videos have been collected, we will transition Shortwork into its second business phase. Here, we will open access to our library of prerecorded video solutions. Videos will be curated and tagged by class, grade level, textbook, and problem number to enable quick searching and indexing. Our approach to marketing this phase will look similar to that of the first phase, but with an added emphasis on the "instant" nature of prerecorded videos.

Customers will retain the ability to submit questions and receive custom video lessons, but will also have the option to get instant access to a prerecorded solution. By allowing multiple uses of the same video, we can increase our profit margin significantly since we won't lose 66% of our revenue to the solver fee.

In effect, phase one of our model will focus on building our library. Phase two will convert the library into a revenue driver.

G. Competitive Analysis

1. Current Alternatives

Our potential competitors lock students into expensive monthly payment plans. SnapAsk, our most similar competition, charges students over $500 for a year of access -

- to get an idea of how ridiculous that is, one would have to submit 167 problems, nearly a problem every other day of the year, to match that cost on Shortwork. On top of that, SnapAsk is only available in Southeast Asia and requires scanned submission of Photo ID and school enrollment documents.

Chegg, our largest potential competitor in America, charges students $15 a month -- $180 a year -- for access to test banks and homework answers. They don't allow photo submissions or video lessons, and all users must create accounts. And Chegg lets anyone solve a problem, whereas we limit our solvers to vetted college students. Furthermore, Chegg's answers often fail to include a sufficient explanation. Many of their "answer" banks are simply copied answers from the back of textbooks. While Chegg may help students pass a particular homework assignment, its lack of explanations means students won't understand the reasoning behind a particular process or function.

Yup, another American competitor, does allow students to submit photos of their homework for custom responses. However, Yup's solvers are only able to offer help through a chat feature within the app. Yup does not allow video responses and is only available to students at participating schools. If a student's school does not have a contract with Yup, he/she is out of luck.

2. Shortwork's Advantages

Shortwork steps outside the traditional limits of online homework help. We understand that every student's financial situation is different, and our service is structured accordingly. By offering students a number of payment options, including the

ability to purchase individual lessons without locking himself/herself into a recurring payment plan, the site is able to better serve a wider range of customers. We do offer optional, volume-discounted payment plans to better suit return customers and improve the likelihood that we convert instance customers into consistent users.

Our competitors also stop short of explaining their answers. Often times, as is the case with Chegg, answers are simply copied from the back of textbooks. And while this approach may help a student complete his/her homework assignment on time, it will not help that student complete similar problems on future assignments. Here is where Shortwork excels. Our video lessons - think of them as analog Khan Academy videos - are designed to teach. Shortwork solvers not only explain how they arrived at the answer, but they also explain the thought process behind their solution. This differentiates our deliverable in a competitive online marketplace and helps us get parents and teachers on board.

By appealing to parents and other academic stakeholders, we can sell Shortwork as a means of improving test scores down the road. Our competitors cannot claim the same. Parents want to see their child succeed at school, as do educators, and Shortwork unifies all parties under one common scoreboard: academic success.

Furthermore, by building an indexed library of custom video solutions, we will offer students instant access to thousands of homework questions. Organized by topic, school, grade level, and textbook, this model will truly differentiate our service among a limited field of homework solution providers.

H. Finances

1. Financial Overview

With the goal of two pilot programs—one at Jackson Academy in Jackson, MS and another at Oxford High School in Oxford, MS—operating by August of 2018, our projections for the 2018–2019 academic year are based on school enrollment data and conservative growth estimates. We are seeking potential investments and revenue from the Rebel Venture Capital, Gillespie Business Plan Competition, and Oxbow Ventures in Jackson, MS.

The investments we are seeking will afford us the opportunity to hone our service in two schools before trying to expand. Though a loss-leading strategy, our service will hopefully gain sufficient traction around the state so as to be profitable in just the second fiscal year. With at least a year of videos archived and indexed, we can then start to sell access to them, at no additional fees aside from possible accompanying server upgrades, to offer existing customers more options, to reach new customers, and ultimately to drive profits substantially.

These projections rest on the assumption that we will not pay ourselves until at least Year 3 of operation. Additionally, we will not need to pay for office space until our Gillespie-provided year of rent at Insight Park expires. As our business grows, we plan to scale up marketing, salaries, and various other indirect expenses over time.

2. Use of Funds

Going forward, we intend to add a full-time web developer to our team. Doing so would free up some of Will's mental bandwidth for managing the site's development. We foresee this web developers salary ranging anywhere from $400 to $600 per month and have budgeted accordingly.

We would also like to fund significant marketing pushes over the next few months. These pushes would involve paying for boosted, targeted social media posts, physical promotional materials, and paid brand ambassadors at high schools and colleges across the region.

As such, we will need to fund early adopter promotions—including the loss-leading two free problems per customer promotion—to gain early market share. On the solver side of things, we are continuing to run weekly giveaways to top-performing solvers in order to incentive performance. We also have a referral program in place that rewards a solver with one homework problem's worth of revenue for every additional solver they sign up.

Further down the road, once we are ready to convert our service from the MVP stage, we are planning to move Shortwork to an iOS application. Our estimates show this endeavor could cost $5,000+. A serious investment for the company, moving our platform to the Apple App Store would give Shortwork the broad exposure it needs to capture critical market share.

I. Success Indicators

1. Milestones

By August 31, 2018, we hope to have raised a mere $100 in revenue. This is only a grand total of 34 sales, but because it will primarily be summer break for high schools between now and then, the goal seems appropriate. We also hope to have launched both of our pilot programs—Jackson Academy and Oxford High School—by then.

By May 15, 2019, we hope to have served 1,800 customers for a total of 15,000 problems solved. This seems like an overly-ambitious goal for a single school-year's worth of growth, but we believe in our ability to fine-tune our service at the pilot schools as we engage new schools to expand our customer base. By this time, to meet the demand for which we are striving, we hope to have 4,000 active solvers. The combined result of these goals is a hopeful $50,000 revenue goal for mid-May 2019.

Going forward from Spring 2019, we hope to have made inroads at a minimum of 10 high schools by June 30, 2020. We are not concerned with revenue targets for 2020 yet because, by the time we have ten active campuses contributing to our online library of problem-solution pairs, we ought to be able to monetize access to that library. Launching our instant-access solution library by June 30, 2020 allows us to focus on scaling the service much more broadly and at lower cost in 2021.

2. Key Metrics

Our milestones are mostly too far out right now to be our primary focus. At this point, our focus is instead on process improvement. As such, we intend to focus on

metrics that indicate service efficiency and model sustainability. We hope to more accurately capture and leverage the Average Cost of Acquiring a Customer. This cost may include free promotional problems, marketing materials, and brand ambassador salaries.

By tracking Lifetime Value of a Customer, we hope to estimate the average lifetime revenue each customer will generate. Capturing this metric will involve estimating average usage per period and number of periods a customer can be expected to continue using the site.

We would like to limit the amount of time it takes a customer to submit their problem to the site by tracking and optimizing Time to Submit a Problem. Doing so would eliminate another barrier to entry for customer submissions and could help Shortwork become an integral part of students' homework routine.

There is no purpose in submitting a problem to Shortwork if that problem is just going to sit in the solver queue indefinitely. As such, we hope to grow our solver base sufficiently to limit the amount of time between problem submission and the problem being claimed (Time to Claim a Problem).

If a solver claims a question and never solves the problem, the question will eventually time out and re-list automatically. This will take time and cause the customer to grow impatient. Even worse, the customer may not use our service again. Thus, we hope to accurately measure Time to Solve a Problem in order to inform customers and set appropriate expectations.

Solvers are key to our model; without them Shortwork fails. As such, we are tracking Number of Solvers and placing great emphasis on growing our solver base as

large as possible to cut down on response times and also allow greater study area customization.

Through ongoing data collection, we hope to pinpoint the necessary Customer to Solver Ratio needed to scale our operation effectively, without a drop off in terms of time to claim and solve a problem. Maintaining this critical ratio is essential to Shortwork's success.

J. Summary

Should every high school student that doesn't understand a homework assignment spend $40 on a tutor? Or should they give up and not learn the material? We think there's a gap between those extremes, and existing options aren't addressing it well.The high school students we've spoken with agree. They want personalized homework help, but they don't want the commitment and cost of a tutor.

Enter Shortwork: an online marketplace where customers can list homework questions and receive videos from college students explaining how to solve them. With the click of a button, students are charged $3 per problem, $2 of which goes to the solvers, who claim problems on a first-come, first-served basis from their curated feeds. All solvers are tested before gaining access to the site, their lessons are verified by other solvers, and students are offered a money-back guarantee.Sites like Chegg and SnapAsk lock students into expensive monthly payment plans. Even worse, they stop short of explaining the answer. Shortwork's videos, on the other hand, is designed around teaching students how to solve a similar problem on their own next time.

Since Shortwork.co launched two weeks ago, over 60 solvers have signed up from three college campuses, and have helped paying customers in four states.At Shortwork, we believe that giving a student the answer to a homework problem might help them come out ahead on that assignment. But teaching a student to work the problem on their own will help them come out ahead every time.

K. Financial Statements

Table 1: Income Statement, FY2019, Monthly Detail

FY2019	Jul '18	Aug '18	Sep'18	Oct '18	Nov '18	Dec '18	Jan '19	Feb '19	Mar '19	Apr '19	May '19	Jun '19
Total Revenue	**$0**	**$1,020**	**$2,123**	**$3,028**	**$4,358**	**$6,944**	**$4,725**	**$8,202**	**$8,876**	**$8,992**	**$9,219**	**$1,333**
Total Direct Costs	**$0**	**$832**	**$1,716**	**$2,445**	**$3,512**	**$5,574**	**$3,808**	**$6,587**	**$7,136**	**$7,242**	**$7,427**	**$1,132**
Gross Margin	$0	$189	$407	$583	$846	$1,370	$917	$1,615	$1,740	$1,750	$1,792	$201
Gross Margin %	**0%**	**19%**	**19%**	**19%**	**19%**	**120%**	**19%**	**20%**	**20%**	**19%**	**19%**	**15%**
Operating Expenses												
Salaries and Wages					$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
Employee Related Expenses												
G Suite Analytics	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10
Github	$7	$7	$7	$7	$7	$7	$7	$7	$7	$7	$7	$7
Server Fee	$7	$7	$7	$7	$7	$7	$25	$25	$25	$25	$25	$25
Insurance		$300	$300	$300	$300	$300	$300	$300	$300	$300	$300	$300
Legal Counsel	$66	$66	$66	$66	$67	$67	$67	$67	$67	$67	$67	$67
Marketing	$1,000	$1,000	$1,000	$1,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
Office Rent											$300	$300
Total Operating Expenses	**$1,090**	**$1,390**	**$1,390**	**$1,390**	**$4,891**	**$4,891**	**$4,909**	**$4,909**	**$4,909**	**$4,909**	**$5,209**	**$5,209**
Operating Income	**($1,090)**	**($1,202)**	**($983)**	**($807)**	**($4,045)**	**($3,521)**	**($3,992)**	**($3,294)**	**($3,169)**	**($3,159)**	**($3,417)**	**($5,008)**
Interest Incurred												
Depreciation and Amortization												
Income Taxes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Expenses	**$1,090**	**$2,222**	**$3,106**	**$3,835**	**$8,403**	**$10,465**	**$8,717**	**$11,496**	**$12,045**	**$12,151**	**$12,636**	**$6,341**
Net Profit	**($1,090)**	**($1,202)**	**($983)**	**($807)**	**($4,045)**	**($3,521)**	**($3,992)**	**($3,294)**	**($3,169)**	**($3,159)**	**($3,417)**	**($5,008)**
Net Profit / Sales		**(118%)**	**(46%)**	**(27%)**	**(93%)**	**(51%)**	**(84%)**	**(40%)**	**(36%)**	**(35%)**	**(37%)**	**(376%)**

Table 2: Income Statement, FY2019–FY2021, Annual Detail

	FY2019	FY2020	FY2021
Total Revenue	**$58,820**	**$447,887**	**$867,067**
Total Direct Costs	**$47,410**	**$153,607**	**$390,015**
Gross Margin	$11,410	$294,281	$477,051
Gross Margin %	**19%**	**66%**	**55%**
Operating Expenses			
Salaries and Wages	$12,000	$32,400	$76,400
Employee Related Expenses		$2,880	$11,680
G Suite Analytics	$120	$120	$120
Github	$84	$84	$84
Server Fee	$192	$600	$3,000
Insurance	$3,300	$3,600	$3,600
Legal Counsel	$800	$800	$800
Marketing	$28,000	$40,000	$65,000
Office Rent	$600	$3,600	$3,600
Total Operating Expenses	**$45,096**	**$84,084**	**$164,284**
Operating Income	**($33,686)**	**$210,196**	**$312,768**
Interest Incurred			
Depreciation and Amortization			
Income Taxes	$0	$35,302	$62,554
Total Expenses	**$92,506**	**$272,993**	**$616,853**
Net Profit	**($33,686)**	**$174,894**	**$250,214**
Net Profit / Sales	**(57%)**	**39%**	**29%**

Table 3: Balance Sheet, FY2019, Monthly Detail

FY2019	Jul '18	Aug '18	Sep'18	Oct '18	Nov '18	Dec '18	Jan '19	Feb '19	Mar '19	Apr '19	May '19	Jun '19
Cash	$48,910	$47,607	$46,514	$50,616	$51,438	$47,659	$43,889	$45,247	$42,011	$38,840	$35,400	$31,181
Accounts Receivable	$0	$102	$212	$303	$436	$694	$473	$820	$888	$899	$922	$133
Inventory												
Other Current Assets												
Total Current Assets	**$48,910**	**$47,709**	**$46,726**	**$50,919**	**$51,874**	**$48,353**	**$44,362**	**$46,067**	**$42,899**	**$39,739**	**$36,322**	**$31,314**
Long-Term Assets												
Accumulated Depreciation												
Total Long-Term Assets												
Total Assets	**$48,910**	**$47,709**	**$46,726**	**$50,919**	**$51,874**	**$48,353**	**$44,362**	**$46,067**	**$42,899**	**$39,739**	**$36,322**	**$31,314**
Accounts Payable	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Income Taxes Payable	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sales Taxes Payable												
Short-Term Debt												
Prepaid Revenue		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Current Liabilities	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Long-Term Debt												
Total Liabilities	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Paid-In-Capital	$50,000	$50,000	$50,000	$55,000	$60,000	$60,000	$60,000	$65,000	$65,000	$65,000	$65,000	$65,000
Retained Earnings												
Earnings	($1,090)	($2,291)	($3,274)	($4,081)	($8,126)	($11,647)	($15,638)	($18,933)	($22,101)	($25,261)	($28,678)	($33,686)
Total Owner's Equity	**$48,910**	**$47,709**	**$46,726**	**$50,919**	**$51,874**	**$48,353**	**$44,362**	**$46,067**	**$42,899**	**$39,739**	**$36,322**	**$31,314**
Total Liabilities & Equity	**$48,910**	**$47,709**	**$46,726**	**$50,919**	**$51,874**	**$48,353**	**$44,362**	**$46,067**	**$42,899**	**$39,739**	**$36,322**	**$31,314**

Table 4: Balance Sheet, FY2019–FY2021, Annual Detail

	FY2019	FY2020	FY2021
Cash	$31,181	$237,061	$513,393
Accounts Receivable	$133	$4,450	$5,583
Inventory			
Other Current Assets			
Total Current Assets	**$31,314**	**$241,511**	**$518,976**
Long-Term Assets			
Accumulated Depreciation			
Total Long-Term Assets			
Total Assets	**$31,314**	**$241,511**	**$518,976**
Accounts Payable	$0	$0	$0
Income Taxes Payable	$0	$35,302	$62,554
Sales Taxes Payable			
Short-Term Debt			
Prepaid Revenue		$0	$0
Total Current Liabilities	**$0**	**$35,302**	**$62,554**
Long-Term Debt			
Total Liabilities	**$0**	**$35,302**	**$62,554**
Paid-In-Capital	$65,000	$65,000	$65,000
Retained Earnings		($33,686)	$141,209
Earnings	($33,686)	$174,895	$250,213
Total Owner's Equity	**$31,314**	**$206,209**	**$456,422**
Total Liabilities & Equity	**$31,314**	**$241,511**	**$518,976**

Table 5: Statement of Cash Flows, FY2019, Monthly Detail

FY2019	Jul '18	Aug '18	Sep'18	Oct '18	Nov '18	Dec '18	Jan '19	Feb '19	Mar '19	Apr '19	May '19	Jun '19
Net Cash Flow from Operations												
Net Profit	($1,090)	($1,201)	($983)	($807)	($4,045)	($3,521)	($3,992)	($3,294)	($3,169)	($3,159)	($3,417)	($5,008)
Depreciation & Amortization												
Change in Accounts Receivable	$0	($102)	($110)	($90)	($133)	($259)	$222	($348)	($67)	($12)	($23)	$789
Change in Inventory												
Change in Accounts Payable	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Change in Income Tax Payable	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Change in Sales Tax Payable												
Change in Prepaid Revenue		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Cash Flow from Operations	**($1,090)**	**($1,303)**	**($1,093)**	**($897)**	**($4,178)**	**($3,780)**	**($3,770)**	**($3,642)**	**($3,236)**	**($3,171)**	**($3,440)**	**($4,219)**
Investing& Financing												
Assets Purchased or Sold												
Investments Received	$50,000			$5,000	$5,000			$5,000				
Change in Long-Term Debt												
Change in Short-Term Debt												
Dividends & Distributions												
Net Cash Flow from Investing & Financing	**$50,000**			**$5,000**	**$5,000**			**$5,000**				
Cash at Beginning of Period	$0	$48,910	$47,607	$46,514	$50,614	$51,438	$47,659	$43,889	$45,247	$42,011	$38,840	$35400.00
Net Change in Cash	$48,910	($1,303)	($1,093)	$4,103	$822	($3,780)	($3,770)	$1,358	($3,236)	($3,171)	($3,440)	($4,219)
Cash at End of Period	$48,910	$47,607	$46,514	$50,617	$51,436	$47,658	$43,889	$45,247	$42,011	$38,840	$35,400	$31,181

Table 6: Statement of Cash Flows, FY2019–FY2021, Annual Detail

	FY2019	FY2020	FY2021
Net Cash Flow from Operations			
Net Profit	($33,686)	$174,895	$250,213
Depreciation & Amortization			
Change in Accounts Receivable	($133)	($4,317)	($1,133)
Change in Inventory			
Change in Accounts Payable	$0	$0	$0
Change in Income Tax Payable	$0	$35,302	$27,252
Change in Sales Tax Payable			
Change in Prepaid Revenue	$0	$0	$0
Net Cash Flow from Operations	**($33,819)**	**$205,880**	**$276,332**
Investing& Financing			
Assets Purchased or Sold			
Investments Received	$65,000		
Change in Long-Term Debt			
Change in Short-Term Debt			
Dividends & Distributions			
Net Cash Flow from Investing & Financing	**$65,000**		
Cash at Beginning of Period	$0	$31,181	$237,061
Net Change in Cash	$31,181	$205,880	$276,332
Cash at End of Period	$31,181	$237,061	$513,393

PART III: POST-OPERATIVE ANALYSIS

A. Analysis of Shortwork's Successes and Shortcomings

Shortwork LLC took shape from an idea discussed casually over lunch in January 2018 to a live website in two weeks. It became a registered legal entity a month later. Within two more months, using the business plan included in this thesis, it had taken first place in two separate pitch competitions, received $6,300 from those competitions, and begun working toward earning the remaining $5,000 promised from the University of Mississippi's Gillespie Business Plan Competition. Over the summer of 2018, we cast a state-wide software developer search to expand our service's capabilities, and we hired someone we thought would be perfect for our team.

By the fall, despite its rapid early growth, Shortwork's momentum had slowed. We had spent the summer communicating remotely with our developer, and his progress was disappointing. Due to the school cycle, we had not earned any new revenue since the spring. Furthermore, our partnership programs failed to take hold at Jackson Academy in Jackson, MS—due to our physical isolation from the school—and Oxford High School in Oxford, MS—due to budget limitations on their part. By 2019, Shortwork had failed to live up to its supposed potential. The following are some hypotheses as to why that happened.

The first is that we focused on the wrong target market. High school students pose some significant challenges to the Shortwork business model that other markets do not. Primarily, high school students have less disposable income than college students, for instance, and even fewer have a credit card for online payment. This does not have an impact on our subscription-based direct competitors or offline competition the way it limits our single-transaction business model. Secondly, as a demographic composed nearly entirely of legal minors, high school students pose legal risks associated with the exposure to adults incurred by using Shortwork's services. Thirdly, we spend significantly less time around high school students than around our fellow college students. As a result, we had less immediate access to our customers directly, strictly limiting our ability to collect feedback on our service in its most critical stage.

At the same time, we chose high school students to be our target market for a few reasons. First and foremost, because of the influence our younger brothers had in our development of the business model, we thought we understood high school students and their challenges better than college students and their challenges. In our research, we were reassured to find that high school students had more disposable income (Lake) and more ability to pay online than we had expected ("Many Teens Carrying Credit and Debit Cards."). Finally, we wanted to leverage the gap in experience between college students and high school students as a shortcut to establish legitimacy when it came to providing academic assistance, as nearly all college students have graduated high school or earned an equivalent degree.

Another road block to Shortwork's success was lack of shared entrepreneurial vision. When I was our only software developer, we were limited—and therefore guided—by my capabilities as a coder. When we began contracting out a hired developer, the possibilities for Shortwork expanded dramatically. Despite having agreed on future plans during the writing of the business plan, once we actually had the capability to grow, our visions diverted. My long-term view remained aligned with the business plan's goal of a mobile app, while my cofounder Sam's became focused on utilizing text messaging as the platform's interface. Shared entrepreneurial vision is frequently cited among the key ingredients to a successful business, and we lacked it (Mol).

In conclusion, we saddled ourselves with a target market that proved too difficult for us to serve effectively, and our diverging visions for the company created unnecessary internal friction that ultimately stalled our momentum. In the future, if I were to ever start another company, I would do it without a co-founder and target a market to which I have direct, frequent access.

B. The Likely Future of Tutoring

The 2019 college admissions scandal involving celebrities bribing their children's ways into top colleges has opened a national discussion about students, educational opportunities, and ethics. A number of journalists have taken aim not just at wealthy people bribing admissions officers but also at the many legal ways to pay for a child's academic competitive advantages. One these ways is hiring tutors (Cohan).

Parents who can afford tutors, private schools, and other expensive educational opportunities for their children are leveraging their privilege, but it might not be something worth fighting or even worrying about. “Does that mean the system is rigged? No… Differential outcomes occur. They create inequalities. But not in a ‘rigged’ way” (Cohan).

The ability to pay for a better education has existed as long as formal education; the private school model far predates the public school model (Gordon, 104). It’s unlikely that any developments in education or tutoring will eliminate the ability to pay for better outcomes, nor should they. Hopefully, more private enterprises will propose innovative, flexible, and affordable study aids that help level the playing field, even if only incrementally. Furthermore, even if at first these new solutions widen the inequality gap (as Shortwork seemed to do), eventually, technological advances and competition will help drive prices down and expand online access as to reach the most in-need students. While the wealthy may always have an advantage, either legal or not, and the playing field might never be truly level, at least developments can be made to improve educational outcomes for all students (Cohan).

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